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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/007,351	11/07/2001	Guenther W. Brune	DCI-17CIP	7015

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BOULDER PATENT SERVICE INC
1021 GAPTER ROAD
BOULDER, CO 803032924

[REDACTED] EXAMINER

STRECKER, GERARD R

[REDACTED] ART UNIT [REDACTED] PAPER NUMBER

2862

DATE MAILED: 11/20/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

AC

Office Action Summary	Application No.	Applicant(s)
	10/007,351	BRUNE ET AL
Examiner	Group Art Unit	
G. R. STRECKER	2862	

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Response

A SHORTENED STATUTORY PERIOD FOR RESPONSE IS SET TO EXPIRE ONE MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a response be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for response specified above is less than thirty (30) days, a response within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for response is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to respond within the set or extended period for response will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- Responsive to communication(s) filed on _____.
- This action is FINAL.
- Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 1 1; 453 O.G. 213.

Disposition of Claims

Claim(s) 1 - 149 is/are pending in the application.
 Of the above claim(s) _____ is/are withdrawn from consideration.
 Claim(s) _____ is/are allowed.
 Claim(s) _____ is/are rejected.
 Claim(s) _____ is/are objected to.
 Claim(s) 1 - 149 are subject to restriction or election requirement.

Application Papers

- See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- The proposed drawing correction, filed on _____ is approved disapproved.
- The drawing(s) filed on _____ is/are objected to by the Examiner.
- The specification is objected to by the Examiner.
- The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
 - All Some* None of the CERTIFIED copies of the priority documents have been received.
 - received in Application No. (Series Code/Serial Number) _____.
 - received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____.

Attachment(s)

- Information Disclosure Statement(s), PTO-1449, Paper No(s). _____
- Interview Summary, PTO-413
- Notice of References Cited, PTO-892
- Notice of Informal Patent Application, PTO-152
- Notice of Draftsperson's Patent Drawing Review, PTO-948
- Other _____

Office Action Summary

Art Unit: 2862

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-14, drawn to a method of and system for changing characteristics of a signal transmitted from a boring tool in response to subjecting the boring tool to a first and second roll rate, classified in class 324, subclass 326.
- II. Claims 15-30 and 32-46, drawn to a transmitter for installation in a boring tool including an arrangement for transmitting frequencies based on a transmitter orientation parameter, and a method for implementing operation of said transmitter, classified in class 324, subclass 326.
- III. Claims 31, 47 and 48, drawn to a transmitter for use in a boring tool and method of use thereof, with restarting an arrangement of the transmitter in response to the transmitter switching states, classified in class 324, subclass 326.
- IV. Claims 49-79, drawn to a tracking method and arrangement for use in a system in which a boring tool is moved underground, and including a transmitter, and a locator responsive to a selected transmitted frequency, classified in class 324, subclass 326.
- V. Claims 80-96, 114-130 and 147, drawn to a tone decoder and tone decoding method including sampling binary data, classified in class 341, subclass 122.
- VI. Claims 97-113, 131-146, 148 and 149, drawn to a tone detection method and arrangement using a plurality of digital filters, classified in class 341, subclass 126.

The inventions are distinct, each from the other because:

Art Unit: 2862

Inventions I-IV and inventions V, VI are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions obviously have different functions and modes of operation.

Further, inventions I-IV are distinct from each other in that they involve different inventive features and concepts. Thus, the invention of Group I is drawn to changing characteristics of a boring tool transmitter in response to roll rate of the boring tool, whereas, the invention of Group II is drawn to the transmission of a selected boring tool transmitter frequency in response to an orientation parameter (pitch) of the transmitter, unrelated to the roll rate of the boring tool, the invention of Group III is directed to a boring tool transmitter and transmitter frequency selection method for restarting a transmitter arrangement of the transmitter upon switching of the transmitter from an off-state to an operational state, and the invention of Group IV is directed to a boring tool tracking method and arrangement including a transmitter and a locator for receiving a locating signal.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

Art Unit: 2862

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(l).

Any inquiry concerning this communication should be directed to G. R. Strecker at telephone number (703) 305-4937.

G.R. Strecker/mm

11/18/02

Gerard R. Strecker
GERARD R. STRECKER
PRIMARY EXAMINER